

# THE VANCOUVER SUN

www.vancouversun.com

THURSDAY, JULY 10, 2003

FINAL EDITION

## Body scans for cancer patients prove safe, accurate

**CLINICAL TRIAL** | The procedures, using radioactive glucose tracer agents, cost \$2,500

BY PAMELA FAYERMAN  
VANCOUVER SUN

A \$200,000 clinical trial involving 75 B.C. cancer patients has shown body scans that use radioactive glucose tracer agents to find malignancies are safe, accurate and very often change and improve the treatment plan, according to preliminary results released Tuesday.

But the scans using Positron Emission Tomography (PET) technology are costly — at \$2,500 — and patients here must pay for them, as they are not covered by the Medical Services Plan.

Indeed, the only facility in B.C. or in Canada that does such scans for both clinical and research purposes, is a private clinic located in leased space on the University of B.C. campus.

Through a unique public/private research collaboration, the B.C. Cancer Agency and the private International PET Diagnostics Inc. (also known as the PETscan Centre) teamed up to determine the safety and usefulness of the radiopharmaceutical drug used in PET scans. Unlike CT, MRI or regular x-rays, which image anatomical structures in the body — and in the case of malignancies, the size and shape of tumours — PET scans tell doctors what is happening inside cells and tissues in terms of chemistry and metabolic activity.

A PET scan can often tell whether a tumour is benign or malignant, without the need for a biopsy or other invasive tests and it can also tell whether the cancer has spread, without a patient having to undergo exploratory surgery.

The only invasive part of the procedure is that a patient must be injected with a radioactive agent. Another downside is that there is a small dose of radiation, but it is said to be less or comparable to a CT scan. PET scans can also

issue false positive readings because infected, inflamed tissue may absorb glucose tracer agents, which is why the technology is not a screening tool for seemingly healthy people; rather, it is usually only indicated for those with suspected or already diagnosed cancer.

PET scans can help oncologists determine the stage of disease because the more active and numerous the cancer cells, the more glucose is absorbed, said Dr. Simon Sutcliffe, head of the B.C. Cancer Agency.

PET scans done after surgery to remove a tumour or after chemotherapy can tell doctors whether there is still some residual malignancy, how quickly after treatment the affected area has been normalized and whether surgery or other treatment options like chemotherapy and radiation will even be helpful.

A Swiss study in a recent issue of the *New England Journal of Medicine* reports that integrated PET-CT scans had better diagnostic accuracy than all other imaging studies and also told surgeons the precise locations of lymph nodes and where cancer had spread.

"PET is the gold standard for assessing operability and the prospects for a cure in lung cancer," Sutcliffe said, adding "It can tell us whether to swap surgery for chemotherapy and it can tell us whether a change in management is medically appropriate," he said, referring to the fact that patients with advanced disease may not benefit from invasive procedures. Such patients can then be offered palliative care and be spared the pain associated with treatment.

Conversely, some patients will become surgical candidates after a PET scan when before such a test, they may not have been considered for such surgery.

In the clinical trial, 75 people who had already received a diagnosis of cancer

(lung, breast, head/neck, colorectal, lymphoma or melanoma) underwent whole body PET scanning.

Nuclear medicine physicians interpreted the scans, which were compared to those obtained from conventional imaging studies and pathology results obtained from biopsy studies.

The still unpublished findings of the clinical trial included the following outcomes:

- The over-all sensitivity of the glucose tracer agent for detecting cancer was 95 per cent and the accuracy was 90 per cent.

- No patients suffered a serious adverse event from the PET imaging.

- Sixty-five per cent of the patients had their cancer treatment influenced or changed by the scan results.

Sutcliffe said while there are hundreds of PET centres in the U.S. and Europe, the Vancouver centre is the only one dedicated to clinical activity in Canada. The few others in Canada — including a machine used by UBC neurologists studying Parkinson's and Alzheimer's disease — are primarily for research.

With the clinical trial completed, Sutcliffe said he is pressing the Provincial Health Services Authority for a budget and/or a facility to be used by the BCCA.

The cancer agency has received approval in principle to acquire a PET scan machine in April 2004. Still to be determined is whether the BCCA will form a private/public partnership with the PET facility on the UBC campus or whether it will buy its own machine and build or renovate a facility in which to place it.

He said buying the equipment costs about \$4.5 million and it costs a like amount in operating funds to do about 2,000 patient scans a year.

The private PETscan Centre opened nearly three years ago in space leased from the B.C. Research and Innovation Complex on Wesbrook Mall.

Sun Health Issues Reporter  
pfayerman@png.canwest.com